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An investigation into the sources of fluctuation in real and nominal wage rates in eight EU countries: A structural VAR approach

Tomoe Moore [a], Eric J. Pentecost [b]

[a] *Coventry Business School, Coventry University, Coventry, CV1 5FB, UK*
[b] *Loughborough University, Loughborough, Leicestershire, LE11 3TU, UK*

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This paper uses the SVAR approach to assess the degree of labor market flexibility, measured as the responsiveness of real and nominal wages to permanent and temporary shocks, in eight EU member states. Four are Western European countries, i.e., France, Italy, UK, and the Netherlands, and four are new members from Central Europe, i.e., Poland, Hungary, Slovakia and the Czech Republic. We assess the suitability of the latter for Euro-area membership. For Hungary and the Czech Republic, we find that real wages are more responsive to real (permanent) shocks than in some current members of the Euro zone, e.g., Italy. In contrast, real wage flexibility is extremely low in Poland and Slovakia so that higher unemployment is more likely in these countries than in other EU countries. Hence, early Euro-area membership is unadvisable for these two countries. *Journal of Comparative Economics* **34** (2) (2006) 357–376. Coventry Business School, Coventry University, Coventry, CV1 5FB, UK; Loughborough University, Loughborough, Leicestershire, LE11 3TU, UK.

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E-mail addresses: t.moore@coventry.ac.uk (T. Moore), e.j.pentecost@lboro.ac.uk (E.J. Pentecost).

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1. Introduction

One criterion for membership in an optimum currency area is labor market flexibility, which consists of both aggregate real wage flexibility and institutional flexibility. Aggregate real wage flexibility determines the overall balance of supply and demand in the labor market. Such flexibility is crucial to maintain high levels of employment in a monetary union because it is a substitute for the adjustment of the nominal exchange rate and for independent monetary policy. Institutional flexibility is based on the features of the national labor markets, e.g., minimum wage legislation, the design of the tax and benefit system, and social protection schemes; it may also serve to support labor market adjustment to shocks. In this paper, we assume that the institutional features are given and focus on nominal and real wage flexibility. Labor market reform has been very slow in that, over a relatively short period of a decade, few significant changes have occurred in the institutional structure of EU labor markets. In addition, such institutional changes are likely to be reflected in greater wage flexibility.

The flexibility of the real wage rate is considered to be an important element of labor market flexibility. The traditional approach to examining labor market flexibility is to estimate a Phillips curve, following Pentecost and Sessions (2002), or a wage curve, as in Card (1995). These two approaches link the rate of unemployment to the rate of change in money wages or the level of the money wage rate, respectively. This literature indicates that unemployment-wage elasticities differ across countries and change over time. Much of the work done in the 1980s estimates a wage–unemployment elasticity of about −0.10; however, recent work by Montuenga-Gomez et al. (2003) uncovers higher elasticities for France and Italy of −1.80 and −0.60, respectively. Recent work on the wage curve for the Central and Eastern European countries (CEECs) by Huber (2004) suggests that, although wages react more strongly to regional unemployment developments in the CEECs than in the developed EU member states, they are slightly less responsive to national unemployment rates.[1]

These studies of the wage curve suffer from the serious limitation that they do not take explicit account of the equilibrating mechanisms in the labor market, whereby the demand for and supply of labor functions adjust to various real and nominal shocks. Real wage movements are a function of the shocks that buffet the demand and supply of labor relations; hence, real wage flexibility, or rigidity, must be measured in a way that allows us to predict how much wage flexibility would result from a given shock. Using a theoretical, dynamic macroeconomic model with imperfect competition, Andersen and Toulemonde (2002) show that temporary shocks are consistent with little real wage responsiveness and large employment responsiveness, while permanent shocks to productivity affect real wages mainly and not employment.

The principal contribution of this paper is to investigate the degree of aggregate real and nominal wage flexibility following real and nominal shocks using the structural VAR (SVAR) analysis of Blanchard and Quah (1989) for eight EU member states from the mid-1990s. The decomposition of shocks into real and nominal shocks is accomplished by imposing a long-run neutrality restriction such that nominal shocks have no long-run effect on the real wage rate. This restriction is consistent with the natural rate hypothesis of neoclassical economic theory. Thus permanent (real) shocks should have a permanent effect on the real wage rate, whereas temporary (nominal) shocks should have only transitory effects. This decomposition is also useful to

[1] In Huber (2004), the sample is based on annual, regional data; it included Bulgaria, the Czech Republic, Estonia, Hungary, Poland, Romania, and Slovenia. Iara and Traistaru (2004) also find that regional average earnings did adjust to local unemployment rates in Bulgaria, Hungary, and Poland.